Abstract of the Disclosure

A method transcodes an input video to an output video, which can have a lower bit rate than the input video. Sets of rate values and corresponding sets of distortion values are determined for each components of the output video. There is one set of rate values and one corresponding set of distortion values for each component in the output video. The components include a requantization of the input video, inserted resynchronization markers, and inserted intra- blocks. Then, bits are allocated to each of the components in the output video according to the associated set of rate values and the associated corresponding set of distortion values.